REMARKS

Claim Objections

The Examiner has objected to claims 9, 20, 28, 35, 39, and 52, and required appropriate correction because of the following informalities: The acronyms need to be spelled out.

With regard to claims 9, 20, 28, 35, 39, and 52, it is respectfully submitted that abbreviations are used in these claims, and abbreviations are expressly allowed by MPEP §608.01(m):

> "Periods may not be used elsewhere in the claims except for abbreviations." See Fressola v. Manbeck, 36 USPQ2d 1211 (D.D.C. 1995)

By indicating that periods are allowable in abbreviations in the claims, it would be obvious that abbreviations are allowable in the claims. The abbreviations used in the claims are well known to those having ordinary skill in the art as indicated by their similar use in Zitting's claims cited below. Withdrawal of the objection is respectfully requested.

Claims 9-11, 15-18, 20,21, 23-25, 29, 30, 34, 35, and 38 are objected to because of the following informalities: The claims contain the clause "adapted to" which is not limiting in scope. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. Therefore appropriate correction is required.

With regard to claims 9-11, 15018, 20-21, 23-25, 29, 30, 34, 35, and 38, it is respectfully submitted that the "adapted to" is limiting in scope and defines present structural attributes of the logic circuitry because the Court has held:

> "[L]imitations such as "members adapted to be positioned"...serve to precisely define present structural attributes of interrelated component parts of the claimed assembly." [underlining and deletion for clarity] *In re* Venezia, 530 F.2d 956, 189 USPQ 149 (CCPA 1976).

Withdrawal of the objection is respectfully requested.

Claims 9 and 20 have been amended to delete the article "a", which is unnecessary before logic circuitry. In claim 20, a colon has been added after emulate to indicate that the emulation is of both a DSLM-C and a DSLM-R.

Claim Rejections - 35 USC § 102

Claims 9-14, 17, 18, 20, 21, 23-28, 31, 32, 34, 35, 38-44, 47, 48, 50, 52-54, 57, 58, and 60 are rejected under 35 U.S.C. §102(e) as being anticipated by Zitting et al. (USPN 6,5841,48 B1, hereinafter "Zitting"). New claims 61-68 would presumably be rejectable on the same basis.

The Examiner states in the Office Action of 3-3-06 (hereinafter the "Office Action"):

> "Regarding claims 9, 20, 23, 35, 39 and 52, Zitting discloses a Remote Test Unit (RTU) (see Fig. 1, remote test interface 36 at customer premises 30), comprising:"

Applicant respectfully disagrees. The Zitting remote test interface 36 is not a test unit but a connector through which signals are switched as explained in Zitting col. 31, lines 31-36:

> "Voice-band signals originating from one or more plain old telephone service (POTS) devices 32 at customer premises 30 typically pass through a POTS splitter 34 and remote test interface 36, described below, and onto a communication line 42." [underlining for clarity]

The Examiner continues that Zitting discloses:

> "-a logic circuitry adapted to emulate a central Digital Subscriber Line Modem (DSLM-C) for testing customer premises equipment...(see Fig. 1, col 1 lines 60-67, col. 3 lines 1-20," [underlining and deletion for clarity for clarity]

Applicant respectfully disagrees. The claimed logic circuitry is not disclosed or mentioned in Zitting to "emulate" a DSLM as evident in Zitting FIG. 1, col. 1, lines 60-67, which states:

> "In one embodiment of the present invention,...a loop management device coupled in the communication path between a DSL access multiplexer (DSLAM) and a DSL modem located at a customer premises. ... The loop management device and the remote test interface communicate using voice-

band signals transmitted over the communication path and collaboratively test the communication path."

Similarly, no circuitry is mentioned to "emulate" a DSLM in Zitting col. 3, lines 1-20, which states:

"service provider equipment and a remote test location, typically at a customer premises. ...the term "DSL" encompasses...the local loop connection between customers and the central office. This includes, but is not limited to...all other "xDSL" technologies." [deletions for clarity]

Due to the ability to "emulate" a DSLM, it is possible to determine whether the DSLM in the system is defective by replacing it in the system by an emulation DSLM and this is not possible in Zitting. The Examininer seems to have confused the words "emulate" and "include".

The Examiner continues that Zitting discloses:

"the co-location cage 29 contains the logic circuitry with DSLAM 28 that contains one or more DSL modems to format the incoming DSL signals for transmission, the DSL signals are than passed to the remote test interface 36 at customer premises which is passed to the customer DSL modem 39);" [underlining for clarity]

It is respectfully submitted that the claim 1 limitation is:

"logic circuitry adapted to emulate a central Digital Subscriber Line Modem (DSLM-C)" [underlining for clarity]

Thus, the claim requires the logic circuitry emulate a DSLM, not that there be a DSLM with the logic circuitry.

The Examiner continues that Zitting discloses:

"-a Digital Subscriber Line Modem Central/Remote (DSLM-C/R) test head connected to the logic circuitry for connecting the logic circuitry to the [Digital Subscriber Line Modem-Remote] DSLM-R and for completing the logic circuitry to the DSLM-C (see Fig. 1, a NID...)" [underlining for clarity]

Applicant respectfully disagrees that Zitting discloses the above. The Zitting NID is a network interface device 44. Those having ordinary skill in the art know that a NID is a device that performs interface functions, such as code conversion, protocol conversion, and

buffering, required for communications to and from a network. This is contrary to the Examiner's statement:

> "[T]he NID can also act as a test head that interfaces with the RTI. In the field of telecommunications testing, it has heretofore been known to provide an expensive and complicated test head for physically coupling with the line under test. The technician physically connects the known test head to the telecommunications line. These known test heads include various electronic circuits for coupling with the line under test, as well as a computer hard-wired thereto."

Because the above is clearly based on the Examiner's personal knowledge, Applicant respectfully requests an Examiner Affidavit disclosing the Examiner's personal knowledge regarding this limitation (of the NID being used as a test head) pursuant to 37 CFR §1.104(d)(2):

> "When a rejection in an application is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant and other persons."

Applicant is entitled to the above affidavit because:

> "As adapted to *ex parte* procedure, Graham [v. John Deere Co.] is interpreted as continuing to place the 'burden of proof on the Patent Office which requires it to produce the factual basis for its rejection of an application under sections 102 and 103.'" [insertion and underlining for clarity] *In re* Piasecki, 745 F.2d 1468, 223 USPQ 785, 788 (Fed. Cir. 1984), quoting *In re* Warner, 379 F.2d 1011, 154 USPQ 173, 177 (C.C.P.A. 1967), *cert. denied*, 389 U.S. 1057 (1968).

With respect to claims 20, 23, 35, and 52, the Examiner states Zitting further discloses:

> "- a copper loop testing (CLT) test head connected to the logic circuitry for connecting the logic circuitry to the customer premises equipment; and wherein: the logic circuitry is further adapted to perform copper loop testing on a first connection between the logic circuitry and the customer premises equipment (see Figs. 1 & 2. col 3 lines 19-22, col 5 lines 45-55, col 6 lines 35-40"

Applicant respectfully disagrees because Zitting does not disclose or mention the claimed elements/limitations including a copper loop testing test head, connection of such a

head to the customer premises equipment, or performing copper loop testing on a first connection between the claimed logic circuitry and the customer premises equipment.

The claimed elements/limitations are not disclosed and only the organization of a telephone network is taught in the cited Zitting FIG. 1 and col. 3, lines 15-30, which states:

> "FIG. 1 illustrates a telephone network 10... Communication lines 42 are typically twisted copper wire pairs that connect central office 20 and customer premises 30. ...numerous customer premises 30 may be coupled to central office 20 using one or more communication lines 42."

The claimed elements/limitations are also not disclosed and only a management device is taught in the cited Zitting FIG. 2 and col. 5, lines 42-58, which states:

> "FIG. 2 illustrates loop management device 26...includes a controller card 110 and...loop access cards 140. Controller card 110...enables management and testing of the communication lines 25 and 27... Each line 25 and 27 is coupled to loop management device 26 using interfaces 142 and 144, respectively."

By reference to Zitting FIGs. 1 and 2, it may be seen that the Zitting management device 26 is for accessing and testing the communication lines 25 and 27, and <u>not the local loops</u> 42 as disclosed in Zitting col. 6, lines 35-41:

> "In addition to accessing and testing communication lines 25 and 27, controller card 110 may also use loop access cards 140 to provide protection switching for lines 25 and 27. For example, in a normal operating mode, each line 25 may be coupled to a corresponding line 27 based on the manner in which lines 25 and 27 interface with a loop 30 [*sic*] access card 140."

The Examiner states:

> "Regarding claims 10, and 24, Zitting discloses the logic circuitry is adapted to <u>emulate</u> a DSLM-R for testing central offices equipment including a Digital Subscriber Line Access Multiplexer (DSLAM) containing a DSLM-C; and the DSLM-C/R test head connects the logic circuitry to the DSLM-C (see Fig. 1, the DSL signals are communicated between DSLAM 28 and DSL modem 39 using a communication path 40. ..." [underlining for clarity]

Applicant respectfully submits that the above description by the Examiner does not provide a *prima facie* explanation of how Zitting discloses <u>emulating</u> a DSLM-R. This is not disclosed in Zitting FIG. 1 as explained above.

The Examiner states:

> "Regarding claims 11, 25, 41 Zitting discloses a copper loop testing (CLT) test head connected to the logic circuitry for connecting the logic circuitry to the customer premises equipment; and wherein: the logic circuitry is further adapted to perform copper loop testing on a first connection between the logic circuitry and the customer premises equipment (see Figs. 1 & 2. col 3 lines 19-22, col 5 lines 45-55, col 6 lines 3540, copper loop wiring 25, 27 may be connected to a test head as appropriate for testing of the copper lines between the central office and customer premises, furthermore, a first line 25 may be tested that is coupled to say pin #1 and pin #2 to the customer premises interface 142 of Fig. 2)."

As explained for claims 20, 23, 35, and 52, Applicant respectfully submits that the above citations and description by the Examiner does not explain how Zitting discloses a copper loop testing test head, connection of such a head to the customer premises equipment, or performing copper loop testing on a first connection between the claimed logic circuitry and the customer premises equipment.

The Examiner states:

> "Regarding claims 12, 26, 42, 53, Zitting discloses a plurality of test ports; and an internal matrix connected to the plurality of test ports for selectively connecting the DSLM-C/R test head and the CLT test head to the plurality of test ports (see Fig. 2, the loop management device shows a plurality of test ports 142,144 and an internal matrix 112, 146 that are connected to the test ports that further connect to a DSLx and test head as appropriate for testing of the lines and modems)." [underlining for clarity]

Applicant respectfully disagrees because Zitting FIG. 2 does not disclose either a DSLM-C/R test head or a CLT test head as indicated by the lack of the FIG. 2 reference numbers. Further, by reference to Zitting FIG. 2, it may be seen that ports 142 and 144 are directly connected to communication lines 25 and 27 with no intervening test heads.

The Examiner states:

> "Regarding claims 13, 27, 43 Zitting discloses test ports connected to a multiplexer (see Figs. 1 & 2, LMD 26 connecting ports 142 144 to the DSLAM 28)."

Applicant respectfully disagrees because Zitting connecting ports 142 and 144 are not connected to the DSLAM 28, but are respectively connected to the main distribution frame 22 and the splitter 23, as can be seen in Zitting FIGs. 1 and 2.

The Examiner states:

> "Regarding claims 14, 28, 44, 54, Zitting discloses short loop testing (see Fig. 8)"

Applicant respectfully disagree because the claims include the limitation, as exemplified in claim 14, which is not disclosed in Zitting FIG. 8 of:

"the DSLM-C/R test head...and the CLT test head..."

Since the claimed test heads required for the claimed short loop testing, Zitting cannot disclose the claimed limitations.

The Examiner states:

> "Regarding claims 17, 18, 31, 32, 47, 48, 57 and 58 Zitting discloses general DSL service connection and testing of the circuit lines between central office and customer end points (see Fig. 1), one skilled in the art will appreciate, an ISP is easily incorporated for broadband data transmissions that uses dial-up, dsl and other communications means to transfer desired data and also voice).

Applicant respectfully disagrees because the claims include the limitation, as exemplified in claim 18, which is not disclosed in Zitting of:

> "the logic circuitry is further adapted to <u>emulate</u> an Internet service provider (ISP) connected to the router." [underlining for clarity]

It is respectfully submitted that the claim reads <u>emulating</u> not <u>incorporating</u> an ISP.

The Examiner states:

> "Regarding claims 38, 40, 50 and 60 Zitting discloses a plurality of test ports; and an internal/access matrix connected to the plurality of test ports for selectively connecting the DSLM-C/R test head and the CLT test head to the plurality of test ports (see Fig. 2, ..., see col 6 lines 8-34.)."

With regard to claims 38, 40, 50 and 60, it is respectively submitted that the claims include the limitation, as exemplified in claim 38, which is not disclosed in Zitting of:

"the DSLM-C/R test head...and the CLT test head..."

It is respectfully submitted that Zitting FIG. 2 discloses that the communication lines 24 and 27 are respectively connected to the ports 142 and 144 without any intervening test heads.

Claims 61-68 are previously cancelled claims 1-8 which, upon reconsideration of the cited art, are believed to be allowable for the reasons provided above. No new matter has been added.

Based on all of the above, it is respectfully submitted that claims 9-14, 17, 18, 20, 21, 23-28, 31, 32, 34, 35, 38-44, 47, 48, 50, 52-54, 57, 58, 60, and 61-68 are allowable under 35 U.S.C. §102(e) as not being anticipated by Zitting because of the failure to disclose various claim elements and limitations as explained above and because:

> "Anticipation requires the disclosure in a single prior art reference disclosure of each and every element of the claim under consideration." W.L. Gore & Assocs. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983) (citing Soundscriber Corp. v. United States, 360 F.2d 954, 960, 148 USPQ 298, 301 (Ct. Cl.), *adopted*, 149 USPQ 640 (Ct. Cl. 1966)), *cert. denied*, 469 U.S. 851 (1984). Carella v. Starlight Archery, 804 F.2d 135, 138, 231 USPQ 644, 646 (Fed. Cir.), *modified on reh'g*, 1 USPQ 2d 1209 (Fed. Cir. 1986); RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984).

Claim Rejections - 35 USC §103

Claims 15, 16, 21, 29, 30, 36, 45, 46, 51, 55, and 56 are rejected under 35 U.S.C. §103(a) as being unpatentable over Zitting et al (US Patent No. 6,584,148 B1, "Zitting") in view of Adams Jr. et al. (US Patent No. 5,444,782 A, hereinafter "Adams"). New claims 61-68 would presumably be rejectable on the same basis.

With regard to claims 15, 16, 21, 29, 30, 36, 45, 46, 51, 55, and 56, the Examiner states:

> "Zitting discloses a system and method for testing digital subscriber lines between central offices and plurality of customer premises (see Fig. 1)."

As explained for the rejections under 35 U.S.C. §102(e), Zitting does not disclose a system or method as claimed. It is further respectfully submitted that the complete lack of the missing elements and limitations also shows that Zitting does not teach or suggest the claimed system and method under 35 U.S.C. §103(a). Therefore, the combination of Zitting and Adams would fail to teach or suggest the claimed invention.

The Examiner states:

> "Zitting fails disclose a concentrator with a multiplexer and router thereto."

Applicant respectfully agrees.

The Examiner states:

> "Adams discloses a concentrator with a multiplexer and router (see col 11 lines 19-35, a computer network encryptor decryptor device incorporates (CNEDD) plurality of devices including a concentrator, router, multiplexer etc.). The use of combined circuitry for a concentrator, router, etc. allows for secure transmission of files from remote locations to a modem.
>
> Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made incorporate a CNEDD within Zitting so as to provide for secure transmission of files from remote locations to a modem." [underlining for clarity]

Applicant respectfully disagrees because it is respectfully submitted that the claims read emulating not incorporating a concentrator, router, etc. Neither Zitting nor Adams teaches or suggests emulating a concentrator, router, etc.

Based on the above, it is respectfully submitted that claims 15, 16, 21, 29, 30, 36, 45, 46, 51, 55, and 56 are allowable under 35 U.S.C. §103(a) as being patentable over Zitting in view of Adams because:

> "[T]he prior art reference (or references when combined) must teach or suggest **all** the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." [Bold for clarity] *In re* Vaeck, 947 F2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)

The other reference cited by the Examiner showing the prior art has been considered and is not believed to disclose, teach, or suggest, either singularly or in combination, Applicant's invention as claimed.

Conclusion

In view of the above, it is submitted that the claims are in condition for allowance and reconsideration of the rejections is respectfully requested. Allowance of claims 9-18, 20-21, 23-32, 34-36, 38-48, 50-58, and 60-68 at an early date is solicited.

Respectfully submitted,

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